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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,118	12/30/2003	Richard L. Boyd	NOR-012CP2 and 286336.151	3277
23483	7590	01/17/2008	EXAMINER	
WILMERHALE/BOSTON 60 STATE STREET BOSTON, MA 02109			NGUYEN, QUANG	
			ART UNIT	PAPER NUMBER
			1633	
			NOTIFICATION DATE	DELIVERY MODE
			01/17/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/749,118	BOYD, RICHARD L.	
	Examiner	Art Unit	
	Quang Nguyen, Ph.D.	1633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-34, 36-43, 45-51, 53-59, 61-68, 70-78, 80-82, 84-86, 91-101 and 103 is/are pending in the application.
- 4a) Of the above claim(s) 34, 43, 46, 51, 53-59, 61-68, 70-78, 84-86, 91 and 101 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-33, 36-42, 45, 47-50, 80-82, 92-100 and 103 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/12/2007 has been entered.

Claims 29-34, 36-43, 45-51, 53-59, 61-68, 70-78, 80-82, 84-86, 91-101 and 103 are pending in the present application.

Claims 34, 43, 46, 51, 53-59, 61-68, 70-78, 84-86, 91 and 101 were withdrawn from further consideration because they are directed to non-elected inventions and non-elected species.

Applicant's elected previously the following species: (a) Leuprolide as a species of disruption of sex-steroid-mediated signaling to the thymus to reactivate the thymus; (b) stem cells as a species of administered cells to the patient; (c) IL-7 as a species of a cytokine; and (d) growth hormone as a species of a growth factor.

Amended claims 29-33, 36-42, 45, 47-50, 80-82, 92-100 and 103 are examined on the merits herein with the aforementioned elected species.

Claim Objections

Claims 93-94 are objected to because they recite embodiments of a non-elected invention (e.g., claims 63 and 55, respectively). Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 29-30, 32-33, 36-37, 39-40, 92, 95, 99-100 and 103 are rejected under 35 U.S.C. 102(e) as being anticipated Slavin, S. (US 6,544,787) and evidenced by Fredrickson et al. (Developmental and Comparative Immunology 18:251-263, 1994; IDS). ***This is a new ground of rejection.***

Slavin discloses at least a method for treating a human patient with a pathogenic cell disease, including an autoimmune disease, said method comprises the steps of: (a) transiently eliminates the patient's functional T lymphocyte population using an intense lymphoablative regimen; (b) subjecting the patient to a submyoablative regimen that includes low-dose ionizing irradiation delivered by an exogenous radiation source such as cobalt or linear accelerator and (c) administering to the patient a donor-derived preparation that includes allogeneic stem cells that are obtained at least from bone marrow, mobilized peripheral blood or cord blood (see at least Summary of the Invention, and section entitled "Method 1" in cols. 5-10). Slavin discloses that the method provides a platform for performing allogeneic cell therapy (allo-CT) for inducing

graft-versus-tumor (GVT), graft-versus-leukemia (GVL) or graft versus autoimmunity effects (e.g., graft versus self-reactive T lymphocyte as in autoimmune disease), and allows for the development of patient-specific allogeneic stem cell preparation (col. 2, lines 31-37; col. 4, lines 12-17). Slavin also teaches that the patient can also be administered with an anti-GVHD agent such as cyclosporine among others (col. 8, line 60 continues to line 14 of col. 9). Additionally, exemplified human patients to be treated range in ages from 1 year old to 61 years old (see Table 1 in col. 13).

It should be noted that a human patient subjected to a low-dose ionizing irradiation delivered by an exogenous radiation source such as cobalt or linear accelerator would fall within the scope of a patient with a thymus undergoing reactivation as evidenced at least by the teachings of Fredrickson et al that disclose that after sublethal irradiation thymic regeneration begins promptly and thymic cellularity is restored to near normal within 2 weeks (see at least the abstract).

Accordingly, the method taught by Slavin meets every limitation of the instantly broad claims. Therefore, the reference anticipates the instant claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29-33, 36-42, 45, 47-50, 92-100 and 103, are rejected under 35 U.S.C. 103(a) as being unpatentable over Sykes et al. (US 5,658,564; IDS) and in view of Slavin, S. (US 6,544,787), Nowak, R (New Scientist 19/26, page 11, January 2, 1999; IDS) and Mathias, JR (US 5,434,136; IDS). ***This is a new ground of rejection.***

Sykes et al disclose at least a method of restoring or inducing immunocompetence or restoring or promoting the thymus-dependent ability for T cell progenitors to mature or develop into functional mature T cells in a host or recipient, including a human adult or a human child, said method comprises the steps of introducing into said host donor thymic tissue, including fetal or neonatal thymic tissue, so that host T cells can mature in the implanted thymic tissue; depleting, inactivating or inhibiting recipient natural killer cells or host T cell function (e.g., introducing antibodies capable of binding to NK cells, T cells and CD4+ cells); irradiating the recipient with low dose, whole body irradiation (e.g., sublethal irradiation, col. 28, lines 47-60); a short course of high dose immunosuppressant such as cyclosporine; as well as recipient genetically modified hematopoietic stem cells expressing a donor antigen (e.g., a donor MHC gene) to facilitate tolerance to subsequent exposure to donor antigen (see at least Summary of the Invention, particularly col. 1, line 38 continues to line 35 of col. 3 and issued claims). Please be noted that a recipient receiving donor thymic tissue, particularly fetal or neonatal thymic tissue, falls within the scope of a patient with a thymus undergoing reactivation. **Sykes et al also teach the same method is used for treating a human at risk for an acquired immune disorder such as AIDS, patients suffering from an immunodeficiency such as a T cell deficiency,**

immunoincompetence resulting from a neoplastic disease or immunoincompetence resulting from a medical procedure such as chemotherapy or radiation treatment (col. 15, lines 31-39).

Sykes et al further teach that due to the discovery that hematopoietic stem cells can be used to induce tolerance to a graft, they disclose a method for inducing immunological tolerance in a recipient mammal, including a human adult or a human child, of a first species to a graft obtained from a donor mammal of a second species, said method comprises prior to or simultaneous with transplantation of the graft, introducing into the recipient mammal hematopoietic stem cells of the second species; depleting, inactivating or inhibiting recipient natural killer cells or host T cell function (e.g., introducing antibodies capable of binding to NK cells, T cells and CD4+ cells); irradiating the recipient with low dose, whole body irradiation (e.g., sublethal irradiation, col. 28, lines 47-60); and a short course of high dose immunosuppressant such as cyclosporine (col. 11, line 16 continues to line 16 of col. 13; and particularly issued claims 21-24). Sykes et al disclose that although hematopoietic stem cells derived from the graft donor are preferable, hematopoietic stem cells may be obtained from other individuals or species, or from genetically-engineered completely or partially inbred donor strains (col. 27, lines 34-37).

Sykes et al do not teach explicitly that the above methods to be used for treating a patient having or suffering an autoimmune disease; and specifically the use of Leuprolide, an LHRH agonist, (the elected species) for restoring or inducing immunocompetence or restoring or promoting the thymus-dependent ability for T cell

progenitors to mature or develop into functional mature T cells in a host or recipient, even though Sykes et al disclose specifically that their methods can be use to treat a human at risk for an acquired immune disorder such as AIDS, patients suffering from an immunodeficiency such as a T cell deficiency, immunoincompetence resulting from a neoplastic disease or immunoincompetence resulting from a medical procedure such as chemotherapy or radiation treatment.

However, at the effective filing date of the present application Slavin already taught a method for treating a human patient with a pathogenic cell disease, including an autoimmune disease, said method comprises an intense lymphoablative regimen, an submyoalative regimen and transplantation of a donor-derived preparation that includes allogeneic stem cells that are obtained at least from bone marrow, mobilized peripheral blood or cord blood (see at least Summary of the Invention, and section entitled "Method 1" in cols. 5-10).

Additionally, Nowak already reported that temporary chemical castration could help regenerate the damaged immune systems of people with HIV or who have had chemotherapy or bone marrow transplants. Nowak further disclosed that the work of Drs. Boyd and Sutherland demonstrated that upon castration, thymus of adult mice regained its youthful appearance within four weeks and the number of T cells produced increased to near pre-pubertal levels, suggesting that drugs (e.g., LHRH or luteinising hormone-releasing hormone) that suppress the production of sex steroids and partially reverse puberty might boost the immune systems of patients with AIDS or those who gave been given immunosuppressive drugs.

Furthermore, Mathias already taught the use of GnRH analogs, particularly Lupron or leuprolide acetate due to its increased biologic activity, stability against enzymatic degradation and high binding affinity for GnRH receptors, for alleviating the debilitating symptoms of motility disorders such as systemic lupus erythematosus, autonomic neuropathies of diabetes mellitus, scleroderma, Parkinson's disease, functional bowel disease at least via their inhibitory activity against the production of reproductive hormones (see at least Summary of the Invention, particularly col. 3, lines 34-46 and 53-60; col. 2, lines 52-62). Mathias further disclosed that GnRH and its analogs are routinely used in the treatment of disorders of the reproductive system, including patients with endometriosis, hormone-dependent tumors such as prostatic mammary carcinomas, polycystic ovarian disease (col. 4, lines 48-62).

Accordingly, it would have been obvious for an ordinary skilled artisan at the time of invention was made to modify the teachings of Sykes et al. by also treating a patient having or suffering an autoimmune disease as well as administering leuprolide to the treated patient in light of the totality of the teachings of Slavin, Nowak, and Mathias as presented above.

An ordinary skilled artisan would have been motivated to carry out the above modification to restore or promote the thymus-dependent ability for T cell progenitors to mature or develop into functional mature T cells in a host or recipient having or suffering from an autoimmune disease, who is also normally subjected to an intense lymphoablative regimen (a chemotherapy), an submyoalative regimen that includes low-

dose ionizing irradiation delivered by an exogenous radiation source as well as allogeneic stem cell transplantation for treatment as taught by Slavin. Please note that Sykes et al disclose specifically that their methods can be use to treat any human suffering immunoincompetence resulting from a medical procedure such as chemotherapy or radiation treatment. Furthermore, Nowak discloses that drugs (e.g., LHRH or luteinising hormone-releasing hormone) that suppress the production of sex steroids and partially reverse puberty might boost the immune systems of patients with AIDS or those who gave been given immunosuppressive drugs, and that GnRH and its analogs such as leuprolide have been used safely in humans for various treatments, including patients with disorders of the reproductive system as well for alleviating the debilitating symptoms of motility disorders such as systemic lupus erythematosus, autonomic neuropathies of diabetes mellitus, scleroderma, Parkinson's disease, functional bowel disease at least via their inhibitory activity against the production of reproductive hormones as taught by Mathias. The resulting modified method is indistinguishable from the method as claimed because it has the same method steps and starting materials.

An ordinary skilled artisan would have a reasonable expectation of success because in light of the teachings of Sykes et al., Slavin, Nowak, and Mathias; coupled with a high level of skill of an ordinary artisan in the relevant art.

Thus, the claimed invention as a whole was *prima facie* obvious in the absence of evidence to the contrary.

Claims 80-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sykes et al. (US 5,658,564; IDS) and in view of Slavin, S. (US 6,544,787), Nowak, R (New Scientist 19/26, page 11, January 2, 1999; IDS) and Mathias, JR (US 5,434,136; IDS) as applied to claims 29-33, 36-42, 45, 47-50, 92-100 and 103 above, and further in view of Bolotin et al. (Blood 88:1887-1894, 1996; IDS). ***This is a new ground of rejection.***

The combined teachings of Sykes et al, Slavin, Norwak and Mathias were disclosed above. However, none of the references specifically teaches a further step of administering IL-7 (the elected species) in any of the disclosed methods.

However, at the effective filing date of the present application Bolotin et al already taught that IL-7 administration promotes thymic reconstitution and enhanced thymopoiesis after bone marrow transplantation (BMT) and is useful in preventing post-bone marrow transplantation immune deficiency (see at least the abstract).

Accordingly, it would have been obvious for an ordinary skilled artisan at the time of invention was made to further modify the combined teachings of Sykes et al, Slavin, Norwak and Mathias by further administering IL-7 into the treated host in light of the teachings of Bolotin et al.

An ordinary skilled artisan would have been motivated to carry out the above modification to enhance thymopoiesis and thereby restoring or promoting the thymus-dependent ability for T cell progenitors to mature or develop into functional mature T

cells, as well as preventing post bone marrow transplantation immune deficiency in the treated patients.

An ordinary skilled artisan would have a reasonable expectation of success because in light of the teachings of Sykes et al, Slavin, Norwak, Mathias and Bolotin et al., coupled with a high level of skill of an ordinary artisan in the relevant art.

Thus, the claimed invention as a whole was *prima facie* obvious in the absence of evidence to the contrary.

Claims 80 and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sykes et al. (US 5,658,564; IDS) and in view of Slavin, S. (US 6,544,787), Nowak, R (New Scientist 19/26, page 11, January 2, 1999; IDS) and Mathias, JR (US 5,434,136; IDS) as applied to claims 29-33, 36-42, 45, 47-50, 92-100 and 103 above, and further in view of Tian et al. (Stem Cells 16:193-199, 1998; Cited previously). ***This is a new ground of rejection.***

With respect to the elected species, the combined teachings of Sykes et al., Slavin, Nowak and Mathias were presented above. However, none of the references specifically teaches a further step of administering a growth hormone (elected species) in any of the disclosed methods.

However, at the effective filing date of the present application Tian et al already taught at least that a recombinant human growth hormone administration promotes hematopoietic reconstitution after syngeneic bone marrow transplantation (BMT) and is

of clinical useful for accelerating hematopoiesis after autologous BMT (see at least the abstract).

Accordingly, it would have been obvious for an ordinary skilled artisan at the time of invention was made to further modify the combined teachings of Sykes et al., Slavin, Nowak and Mathias by further administering a recombinant human growth hormone into a treated patient in light of the teachings of Tian et al.

An ordinary skilled artisan would have been motivated to carry out the above modification to enhance hematopoiesis, including platelet recovery, through enhanced hematopoietic reconstitution in the treated patients as taught by Tian et al.

An ordinary skilled artisan would have a reasonable expectation of success because in light of the teachings of Sykes et al., Slavin, Nowak and Mathias and Tian et al., coupled with a high level of skill of an ordinary artisan in the relevant art.

Thus, the claimed invention as a whole was *prima facie* obvious in the absence of evidence to the contrary.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Amended claims 29-33, 36-37, 39-42, 45, 47-50, 80-82, 92, 94-100 and 103 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 19-26, 28-40, 53, 55-66, 68, 71-72 and 74-75 of copending Application No. 10/749,119. ***The rejection is slightly modified below.***

Although the conflicting claims are not identical, they are not patentably distinct from each other. The instant claims are directed to a method for treating or alleviating symptoms of an autoimmune disease in a patient having or suffering an autoimmune disease, comprising the steps of depleting T cells in the patient; and reactivating the thymus of the patient. Claims 19-26, 28-40, 53, 55-66, 68, 71-72 and 74-75 of copending Application No. 10/749,119 are drawn to a method for inducing tolerance in a patient to a graft from a mismatched donor, comprising the steps of depleting T cells of the patient or providing the patient with immunosuppressive therapy, reactivating the thymus of the patient and administering cells from the mismatched donor to the patient, wherein the cells being selected from the group consisting of stem cells, progenitor cells, dendritic cells, and combinations thereof.

The claims of the present application differ from the claims of the co-pending application in reciting "treating or alleviating symptoms of an autoimmune disease in a patient having or suffering an autoimmune disease". The claims of the present

application can't be considered to be patentably distinct over claims 19-26, 28-40, 53, 55-66, 68, 71-72 and 74-75 of copending Application No. 10/749,119 when the copending application teaches specifically that the treated patient includes one having any T cell disorder, including Lupus-like symptoms or type I diabetes having thymic abnormality (see at least page 10, lines 1-2; and page 2, line 25 continues to line 6 of page 3), and therefore they fall within the scope of claims 29-33, 36-37, 39-42, 45, 47-50, 80-82, 92, 94-100 and 103 of the present application. This is because it would have been obvious to an ordinary skilled artisan to modify the method of the co-pending application for treating autoimmune disease in a patient having or suffering an autoimmune disease to support the instant claims.

An ordinary skilled artisan would have been motivated to do this because this embodiment is apparently disclosed as one of the preferred embodiments.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Argument

Applicants' arguments related to the above rejection in the Amendment filed on 10/12/07 (page 17) have been fully considered, but they are not found to be persuasive for the reasons discussed below.

Applicants argue simply that the claims of the co-pending Application 10/749,119 are directed to methods for inducing tolerance in a patient to a graft from a mismatched

donor, and that these claims do not teach or suggest or motivate one ordinary skilled artisan to arrive at the presently amended claims.

Please note that claims of the co-pending Application 10/749,119 have the same method steps as those of presently amended claims. Furthermore, the claims of the present application can't be considered to be patentably distinct over claims 19-26, 28-40, 53, 55-66, 68, 71-72 and 74-75 of copending Application No. 10/749,119 when the co-pending application teaches specifically that the treated patient includes one having any T cell disorder, including Lupus-like symptoms or type I diabetes having thymic abnormality (see at least page 10, lines 1-2; and page 2, line 25 continues to line 6 of page 3), and therefore they fall within the scope of claims 29-33, 36-37, 39-42, 45, 47-50, 80-82, 92, 94-100 and 103 of the present application. Therefore, it would have been obvious to an ordinary skilled artisan to modify the method of the co-pending application for treating autoimmune disease in a patient having or suffering an autoimmune disease to support the instant claims. An ordinary skilled artisan would have been motivated to do this because this embodiment is apparently disclosed as one of the preferred embodiments.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

At the effective filing date of the present application, Ildstad, S (US 2003/0165475) already taught a non-lethal method of conditioning a recipient for bone marrow transplantation in the treatment of diseases such as hematologic malignancies,

infectious diseases as well as autoimmunity among others, said method comprises at least a sublethal radiation-based conditioning (total body irradiation at 2Gy or lower or total lymphoid irradiation) in combination with anti-lymphocyte globulin (see at least Summary of the Invention and the abstract).

Conclusion

No claim is allowed.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang Nguyen, Ph.D., whose telephone number is (571) 272-0776.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's SPE, Joseph T. Woitach, Ph.D., may be reached at (571) 272-0739.

To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1633; Central Fax No. (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.


QUANG NGUYEN, PH.D.
PRIMARY EXAMINER